

Gasco Sediments Site 2009 Statement of Work Waste Suitability Determination Framework

Prepared by NW Natural and Submitted to EPA on November 16, 2015

1. MGP-Constituent Special Waste Designation

- a. MGP-related material should be managed as a Special Waste “based on the absence of TCE and associated CVOC chemicals and exceedance of TCLP criteria for any MGP-related constituent”. SOW §3.6.3.1 (p. 33).
- b. “If TCLP criteria are exceeded at the time the material leaves the Site, then the material shall be designated Special Waste.” “Special Wastes shall be disposed of at a Subtitle C facility as nonhazardous waste.” “If not, the material would be disposed of as Cleanup Material at a Subtitle D facility that meets the requirements described above.” SOW §3.6.3.1 (p. 33).
- c. “This method applies to both untreated and post treatment materials, if treatment is proposed. Consequently, an untreated material may meet this definition, but, upon treatment may be determined to no longer meet this definition. In the event that treatment, including treatment in barges, changes the definition, the material would no longer be designated a Special Waste” and would be disposed of as Cleanup Material at a Subtitle D facility. SOW §3.6.3.1 (p. 33).
- d. Example of Appropriate Management Process for MGP-Constituent Special Waste Designation Material:

Dredge -> Barge treatment¹ (amendment) -> No MGP TCLP exceedance -> Subtitle D disposal
-> MGP TCLP exceedance -> Subtitle C disposal

2. F002 Hazardous Waste Designation

- a. “The method to determine that sediments impacted only by TCE and associated CVOC chemicals contain F002 Hazardous Waste shall be based on concentrations of TCE, cis-DCE, trans-DCE, 1,1-DCE, and vinyl chloride that exceed DEQ-approved risk-based concentrations (RBCs) to be developed for incidental ingestion, dermal contact and inhalation by landfill workers.” SOW §3.6.3.1 (p. 33).
- b. “This method applies to both untreated and post treatment materials. If following treatment, including treatment in barges, the material no longer exceeds the RBCs..., the material would be determined not to contain F002 Hazardous Waste...” SOW §3.6.3.1 (p. 33).
- c. “If the material is determined to contain F002 Hazardous Waste...because of TCE and associated CVOCs it would be disposed of at a Subtitle C facility. If not, the material would be disposed of as Cleanup Material at a Subtitle D facility that meets the requirements described above.” SOW §3.6.3.1 (p. 33-34).
- d. Example of Appropriate Management Process for F002 Hazardous Waste Designation Material:

¹ The barge treatment testing process is identified in Section 3.6.3.1 of the Statement of Work.

² RBCs have not yet been approved by EPA/DEQ. NW Natural understands the last communications on proposed RBCs are identified in the June 14, 2012 memorandum from Maul Foster Alongi to EPA and DEQ titled “DEQ and EPA’s review of Recommended RBCs for Certain CVOCs for Characterizing Dredged Sediment from Gasco Sediments Site Pursuant to Statement of Work”.

Dredge -> Barge treatment (amendment) -> No RBC exceedances -> Subtitle D disposal
-> RBC exceedances -> Subtitle C disposal

3. Characteristic Hazardous Waste Designation

- a. "If TCE, 1,1-DCE or vinyl chloride are detected in dredged material at concentrations below these RBCs but the material exceeds TCLP criteria for TCE, 1,1-DCE or vinyl chloride, the material shall be designated as a characteristic Hazardous Waste." SOW §3.6.3.1 (p. 33).
- b. "This method applies to both untreated and post treatment materials. If following treatment, including treatment in barges, the material no longer exceeds the...TCLP criteria for TCE and associated CVOCs, the material would be determined not to...be a characteristic Hazardous Waste." SOW §3.6.3.1 (p. 33).
- c. "If following treatment, including treatment in barges, the material no longer exceeds the...TCLP criteria for TCE and associated CVOCs, the material would be determined not to...be a characteristic Hazardous Waste." "If the material is determined to...be a characteristic Hazardous Waste because of TCE and associated CVOCs it would be disposed of at a Subtitle C facility. If not, the material would be disposed of as Cleanup Material at a Subtitle D facility that meets the requirements described above." SOW §3.6.3.1 (p. 33-34).
- d. "In addition, exceedance of TCLP criteria for any chemical other than those associated with MGP-related material or TCE and associated CVOCs, would result in the material being designated characteristic Hazardous Waste." SOW §3.6.3.1 (p. 34). "Hazardous Wastes shall be transported to and disposed of at an appropriate Subtitle C facility." SOW §3.6.3.1 (p. 32).
- e. "Also, if material containing either type of chemicals meets the following additional definitions of characteristic waste, then it shall be designated and disposed of as a characteristic Hazardous Waste:
 - i. Ignitability – Ignitable wastes are those that can create fires under certain conditions, are spontaneously combustible, or have a flash point less than 60 °C (140 °F) as defined in 40 CFR §261.21.
 - ii. Corrosivity – Corrosive wastes are acids or bases (pH less than or equal to 2, or greater than or equal to 12.5) that are capable of corroding metal containers as defined in 40 CFR §261.22.
 - iii. Reactivity – Reactive wastes are unstable under "normal" conditions. They can cause explosions, toxic fumes, gases, or vapors when heated, compressed, or mixed with water as defined in 40 CFR §261.23." SOW §3.6.3.1 (p. 34-35).
- f. Example of Appropriate Management Process for Characteristic Hazardous Waste Designation Material:

Dredge -> Barge treatment (amendment) -> No CVOC TCLP exceedance -> Subtitle D disposal
-> CVOC TCLP exceedance -> Subtitle C disposal

4. Comingled Waste Designation (commingling of TCE and associated CVOC chemicals with MGP-related constituents)

- a. "If it is determined that the concentrations of TCE, cis-DCE, trans-DCE, 1,1-DCE, or vinyl chloride in the comingled material exceed the RBCs, the material shall be designated as a F002 Hazardous Waste". SOW §3.6.3.1 (p. 34). "Hazardous Wastes shall be transported to and disposed of at an appropriate Subtitle C facility." SOW §3.6.3.1 (p. 32).

- b. "If it is determined that TCE, 1,1-DCE, or vinyl chloride exceed TCLP criteria, the commingled material shall be designated and managed as Characteristic Hazardous Waste." SOW §3.6.3.1 (p. 34).
- c. "If it is determined that one or more MGP-related constituents exceed TCLP criteria, the commingled material shall be designated and managed in accordance with applicable state hazardous waste laws." SOW §3.6.3.1 (p. 34). Consistent with the text on page 33 of the SOW, NW Natural would designate such material a Special Waste and dispose of it in a Subtitle C facility as a non-hazardous waste.
- d. "If following treatment, including treatment in barges, the material no longer exceeds the RBCs or the TCLP criteria for TCE and associated CVOs, the material would be determined not to contain F002 Hazardous Waste and not to be a characteristic Hazardous Waste." SOW §3.6.3.1 (p. 33). Consistent with the text on page 34 of the SOW, the material would be disposed of as Cleanup Material at a Subtitle D facility.

5. Disposal Facility Requirements

- a. Subtitle C facility: Must hold a valid RCRA Treatment, Storage, and Disposal Permit and be acceptable to EPA under the Offsite Rule.
- b. Subtitle D facility: Must be permitted by the State to accept the material. If in Oregon, may be required by DEQ to have a special waste management plan.

6. Waste material handling, treatment and disposal health and safety requirements:

- a. Undesignated waste: "Where the material has not been designated (either by pre-construction testing or during construction confirmatory testing, where applicable) as Hazardous Waste or Special Waste, all health and safety procedures (including staff training) shall be consistent with handling of such wastes." SOW §3.6.3.1 (p. 36).
- b. Non-hazardous waste: "Where material is determined to not be Hazardous Waste or Special Waste, all health and safety procedures shall be at least consistent with handling of contaminated non-hazardous wastes." SOW §3.6.3.1 (p. 37).
- c. Hazardous waste or special waste: "For example, for material that is a Hazardous Waste or Special Waste prior to treatment, Hazardous Waste health and safety protocols shall be followed through all steps through treatment completion." "The health and safety procedures and staff training for Hazardous Waste and Special Wastes shall be identical throughout the transport, handling, treatment (if necessary), and disposal process." SOW §3.6.3.1 (p. 37).
- d. Post-treatment waste: "Once the material is determined to be non-hazardous after treatment, either by confirmatory testing or the establishment that particular treatment steps yield nonhazardous waste based on EPA's determinations from previous batches, then health and safety procedures consistent with the handling of non-hazardous waste Cleanup Materials may be employed after that time where protective of health and safety." §3.6.3.1 (p. 37).